

Appln No. 10/045,283

Amdt date November 10, 2005

Reply to Office action of August 8, 2005

Page 9, third paragraph, replace the existing paragraph with the paragraph below:

In the third example, should the desired data bits per transmitted symbol over the measuring interval again be increased, for example, in response to further improved channel conditions, and a data bit rate of about 8.198 data bits per transmitted symbol is desired, bit parser 41 can selectively and adaptively partition the stream of incoming data bits 42 into six, eight-bit data bit vectors ( $k = 8$ ), and two nine-bit data vector ( $k+1 = 9$ ), each of the data bit vectors being grouped as a transmission symbol, and mapped to a signal constellation of competent configuration. In this case, two power-of-two signal constellations ( $2^3 = 8$  signal values and  $2^4 = 16$  signal values) can be used, the first, smaller signal constellation accommodating eight-bit transmission symbols; the second, larger signal constellation accommodating ~~eight-bit~~ nine-bit transmission symbols. The resulting predetermined data bit rate is about 8.250 data bits per transmitted symbol ( $k = 8$ ,  $p = 2$ ,  $q = 8$ ), easily accommodating the 8.198 data bits per transmitted symbol.

11 *third*  
Page ~~12~~, ~~second~~ full paragraph, replace the existing paragraph with the paragraph below:

*BQ*  
*10/20/06*

Constellation selection controller 49 can govern the selection between selectable predetermined integer numbers of data bits, e.g.,  $k$  and  $k+1$  data bits, in bit vector 43 from bit